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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/070,311      | 05/31/2002  | Michael S Cox        | Q68557              | 3092             |

7590 02/24/2005  
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EXAMINER

PATEL, CHIRAG R

ART UNIT PAPER NUMBER

2141

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/070,311             | COX ET AL.          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Chirag R. Patel        | 2141                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 47400/99.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show item 30 in Figure 2 as described in the specification on page 2 in line 20. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 1 is objected to because of the following informalities: The preamble fails to include the statement "wherein the improvement comprises" or "comprising" or "comprising of". Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1, an "arrangement" is defined by webster's dictionary as a placement into a proper order or into a correct or suitable sequence or relationship. Network arrangement is not a process, machine, manufacture or composition of matter. Therefore claim 1 fails to meet the statutory requirements under 35 U.S.C. 101.

As per claims 2-7: Claims 2-7 are also directed to an arrangement but also fail to recite any tangible subject matter.

***Claim Rejections - 35 USC § 112***

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1: The applicant is unclear in claiming "a recursive hierarchy of units" to explain the steps of how the recursive hierarchy is formed. The examiner interprets this to mean that the recursive hierarchy are grouped by a multitude of units.

The applicant is unclear in claiming "the nodes being the units of the first level of the hierarchy" to define whether the units make up or represent the nodes. The examiner interprets this to mean that the units represent the nodes.

The applicant is unclear in claiming "level exchange a corresponding load status information" to define which levels are exchanging load status information with each other. The examiner interprets this to mean that the load information exchange is performed between and among each level of the hierarchy.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by  
Chen et al. (US 5,831,975).

As per claim 1, Chen et al. discloses a network arrangement for a plurality of nodes each node being connected to one or more other nodes (Col 9 lines 15-17, Figure 1) by corresponding node links, (Col 9 lines 22-25, Fig 1: items B.22, B.14, B2, B1)

the network being arranged into a recursive hierarchy of units having two or more levels, (Col 9 lines 11-14, Figure 1)

the nodes being the units of the first level of the hierarchy, (Col 9 lines 15-17; Figure 1: items 22,23)

the units of higher levels of the hierarchy being formed by groupings of the units of the previous level, (Col 9 lines 17-21, Figure 2: items 80, A.1A.2, A.3)

wherein the units of a level exchange a corresponding load status information.  
(Col 5 lines 19-21, Col 5 lines 24-25, Col 8 lines 32-33)

As per claim 2, Chen et al. discloses an arrangement as claimed in claim 1 wherein, within, each group of units, the master entity is designated, (Col 5 lines 6-8, Figure 1: items A1.1, A.2, 3.6) the master entity conveying inter-unit load status information relating to the units of that level to the next higher level. (Col 5 lines 19-21, Col 5 lines 27-33)

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As per claim 3, Chen et al. discloses an arrangement as claimed in claim 1 wherein, in the first level, a selected node in each group is designated as the master node for the corresponding group, (Col 5 lines 6-8, Figure 1: item 22, A.1.1) The peer-group leader (PGL) represents the master node for each group.

the master node managing the transfer of node load status information within its corresponding group. (Col 5 lines 33-34)

As per claim 4, Chen et al. discloses an arrangement as claimed in claim 1 wherein the load status information includes information on the available traffic capacity between the ports of each unit. (Col 5 lines 19-21)

As per claim 5, Chen et al. discloses an arrangement as claimed in claim 1 wherein each node includes node load status monitoring means to monitor the load status of the links connected to the node. (Col 5 lines 34-37)

As per claim 6, Chen et al. discloses an arrangement as claimed in claim 1 wherein at least one node of each second level group is connected to a node of at least one other second level group via a corresponding group link whereby group load status information can be interchange. (Col 9 lines 22-24, Figure 2 item B.1, B.2)

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As per claim 7, Chen et al. discloses an arrangement as claimed in claim 6 wherein the units of the third level are formed by mutually interconnected second level units. (Col 9 lines 25-33, Figure 3: item 64 – A & B)

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hartmann (US 5,537,468) discloses a non-hierarchical method for routing traffic to achieve optimum throughput value under all traffic load states. Buyukkoc et al. (US 6,081,506) discloses an efficient approach and apparatus for selecting virtual paths in a network for routing datagrams that allows for effective sharing of capacity without affecting call setup latency. Jain (PNNI: Routing in ATM Networks," Ohio State University, Department of Computer Science, May 18, 1999, [http://www.cse.ohio-state.edu/~jain/atm/ftp/atm\\_pnni.pdf](http://www.cse.ohio-state.edu/~jain/atm/ftp/atm_pnni.pdf)) discloses a hierarchical topology using PNNI in ATM networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag R. Patel whose telephone number is (571)272-7966. The examiner can normally be reached on Monday to Friday from 7:30AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia, can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER